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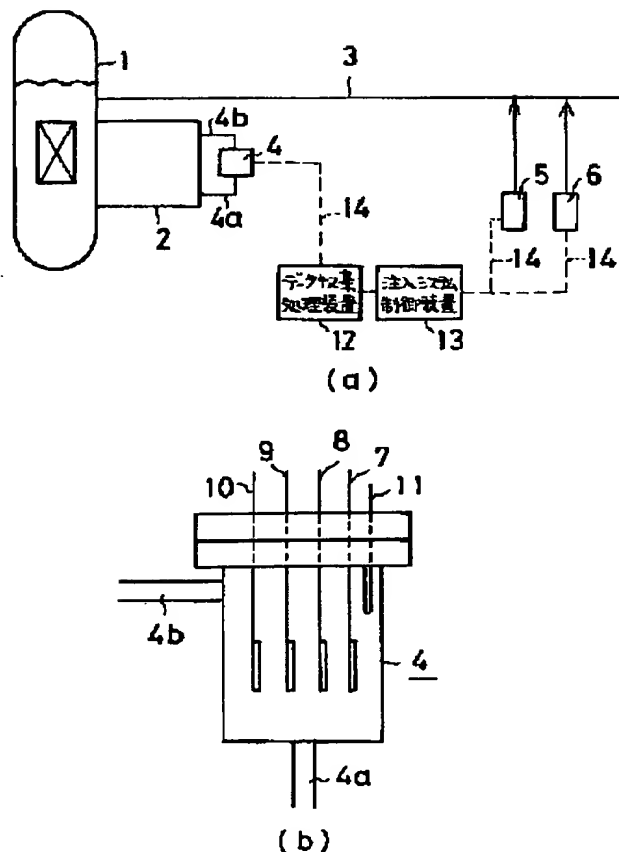
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APPLICANT : TOSHIBA CORP;

INVENTOR : TAKAGI JUNICHI;

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TITLE : WATER QUALITY CONTROL METHOD
FOR NUCLEAR REACTOR



ABSTRACT : PURPOSE: To suppress elution of metal and to reduce adhesion of radioactive substance to piping by grasping the characteristics of metal oxide and performing water quality control stably through various measurements.

CONSTITUTION: A recirculation line 2 is coupled with an autoclave 4 for electrochemical measurement through a flow-in pipe 4a and a flow-out pipe 4b, and a water supply pipe 3 is coupled with a chemical injection line 5 and a gas injection line 6. A data collector/processor 12 and an injection system controller 13 are interposed between the autoclave 4 and the lines 5, 6 through a signal line 14. The autoclave 4 is provided with a reference electrode 7 for potential measurement, a sample electrode 8 for corrosion potential measurement, an electrode 9 for pH measurement, a platinum electrode 10 for oxidation/reduction potential measurement, and a temperature sensor 11, and reactor water flows into the line 2 or flows out therefrom through the pipes 4a, 4b. pH, oxidation/reduction potential, etc., of the compositional material of reactor are then measured and the characteristics of metal oxide on the surface thereof are grasped thus controlling the water quality such that a region of most stable potential and pH can be realized.

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